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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,878

11/20/2006

Andrew Phillip Churchill

CRUI/0034

8432

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EXAMINER

STEPHENSON, DANIEL P

ART UNIT

PAPER NUMBER

3676

MAIL DATE

DELIVERY MODE

08/21/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/595,878	<b>Applicant(s)</b> CHURCHILL, ANDREW PHILLIP	
	<b>Examiner</b> DANIEL P. STEPHENSON	<b>Art Unit</b> 3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 and 38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-28, 30-34 and 38 is/are rejected.
- 7) ☒ Claim(s) 16, 29 and 35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15, 17-28, 30-34 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hennig et al. (US 5,609,178) in view of McDonald et al. (US 4,936,397).

Hennig et al. discloses a downhole tool. It includes a body adapted to be incorporated in a string of tubing for carrying fluid from surface towards a distal end of the string. The body has a bore and with a valve arrangement including at least one flow port (13) in the wall of the body. The port may be selectively opened and sealed closed. The valve arrangement is biased towards a closed configuration. The valve arrangement is initially retained in one of a closed configuration. Hennig et al. does not disclose that there is a variable flow restriction in the bore responsive to flow from surface towards the distal end of the string through the tubing, the degree of restriction tending to decrease as flow across the restriction increases. Nor does it disclose that the variable flow restriction is adapted to control fluid flow through the body bore below the ports to establish a pressure differential to activate the valve.

McDonald et al. discloses a variable flow restriction within a tubular that is responsive to flow from surface towards the distal end of the string through the tubing, the degree of restriction tending to decrease as flow across the restriction increases. The restriction substantially closes the bore. The restriction may be placed downhole or uphole from the valve. It would have

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been obvious to one of ordinary skill in the art at the time the invention was made to place the flow restriction of McDonald et al. above or below the valve of Hennig et al. This would be done to have greater control over the fluid pressure within the bore.

With regards to the recitation that the valve being biased to the open position, it is taken as Official Notice that it is well known within the wellbore art the valves can be pressure actuated to be opened or closed from an initial configuration with either an open position or a closed position. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a valve with an initially open position with the apparatus of Hennig et al. in view of McDonald et al. This would be done to provide an initially open system downhole.

With regards to claims 12-14, a "further flow restriction" is not required by claim 11, and thus, the claim limitations have not been applied to this reference combination.

### ***Allowable Subject Matter***

3. Claims 16, 29 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL P. STEPHENSON whose telephone number is (571)272-7035. The examiner can normally be reached on 8:30 - 5:00 M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Gay can be reached on (571) 272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer H Gay/  
Supervisory Patent Examiner, Art Unit  
3676

DPS